#### Part 1: Flexible and reusable, the ADE/V (valve) sealing system

DOIF Kabeltechnik GmbH 🔨

The economical sealing system for cable ducts and cable wall penetrations (underground installation)



#### General product information

- Europ. Patent Fibre Optics CT GmbH
- Construction: the ADE sealing elements are made of laminated foil with a welded metal compressed-air valve. Standard colour: light blue
- A universal, economical sealant system for a working temperature of -15°C to +30°C. Sealing diameter 25-150 mm
- Simple, speedy installation and removal (even in confined spaces)
- Ready for immediate use, can be inflated with readily available inflation tools
- Reusability:
  - The pressure can be reduced 4 times e.g.when reconfiguring cables
  - The sealing element can be removed and replaced 4 times when laying cables for the first time
  - Reinflatable
- The seal has a service life of > 20 years against gas diffusion, up to 5 m water column or chemicals from pH2 to pH12
- Technical approval certificate of Deutsche Telekom AG, T-Home, network operators e.g. Deutsche Bahn, ASFiNAG, waterways authorities. motorway authorities etc.

#### **\*** Our sealing technology

For the gas and water tight sealing of cable ducts and cable penetrations through walls intended for optical / electric telecom cables and/or medium pipes in the tele-communication sector (ADE/V).

The sealing element is placed in the duct or cable penetration etc. and inflated to the required pressure via the compressed-air valve. After inflation, the sealing element expands to completely fill the sealing space.

The sealing element is removed by letting out the air again via the compressed-air valve.

## Advantages of our sealing technology over standard techniques

- Less leakage [1,5 bis 2,7 mbarl/ year] compared with current techniques [90 to 138 mbarl/year (example from one competitor)], hence longer service life (more than 20 years)
- Simple, fast removal (about 4 min). No permanent adherence of sealing tape to ducts and cables due to new technology
- 3. No damage to ducts or cables (Damage is likely to occur when removing shrink-on sealing types)
- 4. Usable independently of number and outer diameter of cables already laid. This reduces storage costs, as a single type of sealing element can be used to cover a wide sealing range.
- 5. Simple to handle and quick to install. For multi-cable ducts or cable penetrations through walls only one additional component is required per application (permanently plastic sealing tape or sealing star.)
- Various lengths and widths available to cover sealing diameters from 25 mm to 150 mm: Type L = 135 mm

# Simple and fast installing an ADE/V sealing system

Lay the sealing cushion round the cable.

Push it into the cable duct or cable penetration

Inflate via the tyre valve.







Wrap sealing tape round each individual cable.

Use rolled-up sealing tape to fill any gaps





After inflation, lay valve extension in a circular position (below, left photo) or position it parallel to the cables either outside (below, middle photo) or inside (photo top right), and fix in position with insulating tape or enclose it in permanently elastic sealing tape.



# Delivery programme Type L ...

|                         | Duct                 |   |   |
|-------------------------|----------------------|---|---|
| Article No.<br>Part No. | Inner Ø<br>Ø<br>[mm] | Sealin<br>configu<br>Ø<br>optimal<br>[mm] | • |
| 20.1 ADE/V L-25         | 25                   | 13  | 0 |
| 20.1 ADE/V L-35         | 35                   | 22  | 0 |
|                         | 30                   | 18  | 0 |
| 20.1 ADE/V L-40         | 40                   | 22  | 0 |
|                         | 35                   | 11  | 0 |
| 20.1 ADE/V L-45         | 45                   | 32  | 0 |
|                         | 40                   | 27  | 0 |
|                         | 35                   | 18  | 0 |
| 20.1 ADE/V L-50         | 50                   | 33  | 0 |
|                         | 45                   | 25  | 0 |
| 20.1 ADE/V L-60         | 60                   | 42  | 0 |
|                         | 50                   | 26  | 0 |
| 20.1 ADE/V L-80         | 80                   | 57  | 0 |
|                         | 70                   | 41  | 0 |
|                         | 60                   | 30  | 0 |

|                         |                      | Duct |   |
|-------------------------|----------------------|------|---|
| Article No.<br>Part No. | Inner Ø<br>Ø<br>[mm] |      | g area<br>uration<br>Ø<br>minimal<br>[mm] |
| 20.1 ADE/V L-100        | 105                  | 80   | 0   |
|                         | 95                   | 65   | 0   |
|                         | 85                   | 54   | 0   |
| 20.1 ADE/V L-100-x      | 105                  | 74   | 0   |
|                         | 95                   | 63   | 0   |
| 20.1 ADE/V L-115        | 115                  | 89   | 0   |
|                         | 105                  | 70   | 0   |
|                         | 95                   | 63   | 0   |
| 20.1 ADE/V L-115-x      | 115                  | 80   | 0   |
|                         | 105                  | 70   | 0   |
| 20.1 ADE/V L-125        | 125                  | 97   | 20  |
|                         | 115                  | 82   | 10  |
|                         | 105                  | 71   | 0   |
| 20.1 ADE/V L-125-x      | 125                  | 88   | 17  |
|                         | 115                  | 75   | 7   |
| 20.1 ADE/V L-150        | 150                  | 119  | 42  |
|                         | 140                  | 104  | 32  |
|                         | 130                  | 93   | 22  |

extra-long sealing element, allowing gas and watertight х sealing of max. 2 cables without need of accessories

For sealing with configurations of more than 2 cables: accessory Art. No. 23 D1/100-10

> (1) Measurements are for cable ducts or wall penetrations have a smooth inner surface. If the inner surface is modified, the max. admissible sum of cable Ø must be reduced by approx. 4 mm

For detailled information on ADE/V and UA/V (valve) construction

Reusability

- [WO01] ADE (Part3) Design comparison **Decision analysis**
- [WO02] ADE (Part1-1)
- [WO02] ADE (Part1) Cost efficiency calculation
- [WO02] ADE (Part2) **Construction features**
- [WO02] ADE (Part3)

# Supplier

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